Message

From: d'Almeida, Carolyn K. [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=9EC4401AFA1846DD93D52A0DDA973581-CDALMEID]
Sent: 3/22/2016 4:01:47 PM
To: Davis, Eva [Davis.Eva@epa.gov]
Subject: FW: 2016-3-22 - wafb - FYI - ebr surfactants may not benefit - st012 - opinion bo stewart praxis

From: Wayne Miller [mailto:Miller.Wayne@azdeq.gov]
Sent: Tuesday, March 22, 2016 9:00 AM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Subject: 2016-3-22 - wafb - FYI - ebr surfactants may not benefit - st012 - opinion bo stewart praxis

FYI – see bo stewart praxis environmental opinion below

From: Steve Willis [mailto:steve@uxopro.com]
Sent: Monday, March 21, 2016 2:27 PM
To: Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: 2016-3-21 - wafb -ebr surfactants may not benefit - st012 - opinion bo stewart praxis

Response from Bo regarding surfactant injection.

Steven A. Willis, R.G.
UXO Pro, Inc.
Arizona Registered Geologist #30448
(480) 316-3373
steve@uxopro.com

----- Original Message -----
From: Bo Stewart <Bo@praxis-enviro.com>
To: Steve Willis <steve@uxopro.com>; Eleanor Jennings <ejennings@teci.pro>
Sent: Monday, March 21, 2016 2:23:32 PM
Subject: Re: FWD: 2016-3-21 - wafb -FYI - ebr surfactants idea - st012 - edavis epa -

Surfactants have a high probability of wreaking havoc on the groundwater treatment system. Efficiency of NAPL separators would decrease, foaming would occur in the air strippers, and who knows what else. The net result is likely a reduction in extraction rate and a reduction in mass recovery rate even if apparent concentrations are higher. Small amounts of surfactant in the treatment system can make dramatic changes.

In addition, most surfactants do not like excessive heat such that the benefits in a heated zone may be lost.

On 3/21/2016 2:14 PM, Steve Willis wrote:

Another FYI

Steven A. Willis, R.G.
UXO Pro, Inc.
Arizona Registered Geologist #30448
(480) 316-3373
steve@uxopro.com

----- Original Message -----
From: Wayne Miller <Miller.Wayne@azdeq.gov>
To: steve <steve@uxopro.com>
Sent: Monday, March 21, 2016 2:03:56 PM
Subject: 2016-3-21 - wafb -FYI - ebr surfactants idea - st012 - edavis epa -

FYI – see email train

From: Davis, Eva [mailto:Davis.Eva@epa.gov]
Sent: Monday, March 21, 2016 12:36 PM
To: d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>; Dan Pope <DPope@css-dynamac.com>
Cc: Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: 2016-3-21 - wafb - ebr surfactants idea - st012 - edavis epa -

I'm not sure about that –

From: d'Almeida, Carolyn K.
Sent: Monday, March 21, 2016 1:30 PM
To: Dan Pope <DPope@css-dynamac.com>; Davis, Eva <Davis.Eva@epa.gov>
Cc: Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: RE: idea

That could be the remedy failure contingency fall back.

From: Dan Pope [mailto:DPope@css-dynamac.com]
Sent: Monday, March 21, 2016 11:20 AM
To: Davis, Eva <Davis.Eva@epa.gov>; d'Almeida, Carolyn K. <dAlmeida.Carolyn@epa.gov>
Cc: Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: RE: idea

Surfactant biodegradation depends on the surfactant, so it's hard to say without much more data.

It's just that using surfactants, while potentially useful, would be something that you'd want to study very carefully. As Carolyn mentioned, you'd want to be sure you had excellent hydraulic control. Also, if some of the contaminant concentrations are pretty high already, you'd want to be careful about doing something that might increase GW concentrations.

From: Davis, Eva [mailto:Davis.Eva@epa.gov]
Sent: Monday, March 21, 2016 1:15 PM
To: Dan Pope; d'Almeida, Carolyn K.
Cc: Wayne Miller
Subject: RE: idea

Would surfactants also have a demand on TEA – requiring more sulfate?

From: Dan Pope [mailto:DPope@css-dynamac.com]
Sent: Monday, March 21, 2016 1:13 PM
To: d'Almeida, Carolyn K. < dAlmeida.Carolyn@epa.gov>; Davis, Eva <Davis.Eva@epa.gov>
Cc: Wayne Miller <Miller.Wayne@azdeq.gov>
Subject: RE: idea

I'm not sure I'd be up for anything that would be potentially significantly mobilizing contaminants, at this stage. There's a lot of processes going on, and it's really difficult to be sure what they will balance out to.

From: d'Almeida, Carolyn K. [mailto:dAlmeida.Carolyn@epa.gov]
Sent: Monday, March 21, 2016 1:06 PM
To: Davis, Eva; Dan Pope
Cc: Wayne Miller
Subject: idea

Looking at the EBR RTCs, I am wondering if maybe they should be injecting surfactants during the 12 week pumping period before sulfate injection?

Carolyn d'Almeida

Remedial Project Manager

Federal Facilites Branch (SFD 8-1)

US EPA Region 9

(415) 972-3150

"Because a waste is a terrible thing to mind..."

--
Lloyd "Bo" Stewart, PhD, PE
Praxis Environmental Tech., Inc.

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